



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------|-------------|----------------------|---------------------|------------------|
| 10/813,112 | 03/31/2004 | Siva G. Narendra | INTEL-0042 | 5552 |
| 34610 | 7590 | 06/27/2005 | EXAMINER | |
| FLESHNER & KIM, LLP | | | DINKINS, ANTHONY | |
| P.O. BOX 221200 | | | ART UNIT | |
| CHANTILLY, VA 20153 | | | PAPER NUMBER | |

2831

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,112

Applicant(s)

NARENDRA ET AL.

Examiner

Anthony Dinkins

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-5,7,8,11,14,15,25 and 27 is/are allowed.
- 6) ☒ Claim(s) 6,9,10,12-14,16 and 28 is/are rejected.
- 7) ☒ Claim(s) 17-20,29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2831

1. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.
2. The indicated allowability of claims 6, 9-10, 12-13, 16, and 28 are withdrawn in view of the rejection shown below and newly discovered reference(s) to Kurabayashi et al. (5,086,373). Rejection of claim 16 is based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (6,483,691). Nakamura et al. disclose in Figure 7 an ultracapacitor, comprising a semiconductor substrate (1); N conductive layers (4, 6) on the substrate, and N-1 dielectric layers (5) formed between the conductive layers respectively. Nakamura et al. disclose applicant's claimed invention except for having the N conductive layers as $N > 2$. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the N conductive layers as $N > 2$, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Claim 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (6,483,691). Nakamura et al. disclose in Figure 7 an ultracapacitor, comprising a semiconductor substrate (1); N conductive layers (4,

Art Unit: 2831

6) on the substrate, and N-1 dielectric layers (5) formed between the conductive layers respectively. Nakamura et al. disclose applicant's claimed invention except for having the N conductive layers as $N > 2$ and wherein the N conductive layers include adjacent pairs of conductive layers and wherein the conductive layers in each pair having the same width (re: claim 9) or the conductive layers in each pair being different from the widths of the conductive layers in every other pair (re: claim 10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the N conductive layers as $N > 2$ and wherein the N conductive layers include adjacent pairs of conductive layers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Furthermore, it would have been an obvious matter of design choice to have the conductive layers in each pair having the same width (re: claim 9) as well as having the conductive layers in each pair being different from the widths of the conductive layers in every other pair (re: claim 10), since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (6,483,691). Nakamura et al. disclose in Figure 7 an ultracapacitor, comprising a semiconductor substrate (1); N conductive layers (4, 6) on the substrate, and N-1 dielectric layers (5) formed between the conductive layers respectively. Nakamura et al. disclose applicant's claimed invention except for having the N conductive layers as $N > 2$ and wherein the N conductive layers are spaced differently. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the N conductive layers as $N > 2$,

Art Unit: 2831

since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the N conductive layers spaced differently, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (6,483,691). Nakamura et al. disclose in Figure 7 an ultracapacitor, comprising a semiconductor substrate (1); N conductive layers (4, 6) on the substrate, and N-1 dielectric layers (5) formed between the conductive layers respectively. Nakamura et al. disclose applicant's claimed invention except for having the N conductive layers as $N > 2$ and wherein the conductive and dielectric layers form a plurality of capacitors connected in parallel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the N conductive layers as $N > 2$, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the conductive and dielectric layers form a plurality of capacitors connected in parallel, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurabayashi et al. (5,086,373). Kurabayashi et al. disclose in Figure 1 an ultra first ultracapacitor which also is commonly referred to a double layer capacitor; which could be used in an integrated circuit, col. 1, lines 9-12. Kurabayashi et al.

Art Unit: 2831

disclose in applicant's claimed invention except for having a second ultracapacitor connected in series to the first ultracapacitor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a second ultracapacitor connected in series to the first ultracapacitor, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (6,483,691). Nakamura et al. disclose in Figure 7 an ultracapacitor, comprising a semiconductor substrate (1); N conductive layers (4, 6) on the substrate, and N-1 dielectric layers (5) formed between the conductive layers respectively. Nakamura et al. disclose applicant's claimed invention except for having the N conductive layers as $N > 2$ and the conductive and dielectric layers store a charge corresponding to a predetermined voltage and form a plurality of capacitors connected in parallel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the N conductive layers as $N > 2$, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a plurality of capacitors connected in parallel which then a charge would be stored at a predetermined voltage since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Art Unit: 2831

4. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 1, 3, 4, 5, 7, 8, 11, 14, 15, 25, and 27 the allowability in combination with the other claimed features is because nowhere in the prior art is there an ultracapacitor having the even numbered ones of the N conductive layers are connected to a first voltage and odd numbered ones of the N conductive layers are set to a second voltage.

Claims 17-20 and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Dinkins whose telephone number is (571) 272-1972. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext.

31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2831

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Dinkins
Primary Examiner
Art Unit 2831

AD



**ANTHONY DINKINS
PRIMARY EXAMINER**